Greek extra virgin olive oil in USA: A framework to build a Greek brand equity

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Abstract

Greek olive oil is among the finest in the world. However, production and quality do not keep up with marketing and exporting activities. Italy and Spain absorb Greek olive oil, package it and merchandize it as their own. USA is one of the main importers of extra virgin olive oil (EVOO) globally and a growing market. Nevertheless, there is no evidence about this market and how Greek producers could exploit it.As Greece is the first producer of EVOO in the world, this could be an exporting oppurtunity. The lack of information for the USA olive oil market is the main purpose of this study, which aims to deliver a profile of the US market and guidelines for potential exporting activities. The present study investigates (1) the demographic characteristics of the average US consumer of extra virgin olive oil , (2) the key attributes that affect consumer perception for EVOO and (3) how consumers evaluate and take into account these attributes. A group of 125 American consumers participated in the survey and answered an electronic questionnaire sent via email. The results reveal that flavor and price are the most important cues of EVOO and influence consumers' purchase intention positively. On the other hand, origin and package have a secondary,neutral effect on them. Additionally, EVOO seems to appeal to a young, educated, health conscious and high-earning public. Based on this information, a framework suggests a profile of the US market and ways to enter it.

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Introduction

After four years of continuing recession, young people face a dilemma whether to stay home jobless or travel abroad to get a job. For those who wish to stay home, more and more are willing to start their own bussiness instead of waiting for a salary job. To that end, primary sector of the

economy and especially agricultural products has become very popular to deal with.

1.1. Olive oil global market

Since the financial crisis of 2008 has pledged among other countries Greece too, the need for exporting activity is evident in order to help the Greek economy restart and grow again. Greek branded olive oil accounts only for 2.7% of global exports (IOC, 2012), despite the fact that Greece is the third olive oil producer in the world and the first extra virgin olive oil producer. Nevertheless, the amount leveraged by these exports does not meet full potential. The main problem is that olive oil and especially extra virgin (EVOO) is being traded in bulk (IOC, 2012) thus diminishing the selling price for the product. Italy as the main importer of Greek olive oil has managed to brand Italian olive oil as the finest in the world and leverage around €3,31/ kg of EVOO which is higher than Greece (€2,0267/kg) and Spain(€1,965/kg). Therefore the need for a Greek brand of extra virgin olive oil is imminent as it can be an entrepreneurial opportunity with great upside. The USA is a great market with growing imports and consumption (5% annual growth) of olive oil; the market accounts for 10% of global consumption (IOC, 2014) and will be the focus of this study.

The major problem of Greek producers is the lack of marketing for their agricultural-food products. Especially, for the US market there has been no other research to explore the perception of Americans for the Greek olive oil, particularly for extra virgin. As Greece controls the global market for this specific olive oil category, this could be capitalized with proper marketing and become a premium food product and eventually an asset of Greek economy.

1.2. Research objectives

For this purpose, the need for a market research is unquestionable in order to deliver a profile of the average US consumer of EVOO. This could be a guide on how to create a desirable EVOO for all interested new or existing entrepreneurs in the agri-food sector that wish to start exporting activities in the growing US market.Due to the fact that most researches were qualitative (usually focus groups) the main objective of this study is to provide measurable results that give a quantitative approach of the subject.

Analytically, this research aims to identify:

a) the demographic characteristics of the US consumer

b) the factors that influence his/her decision to purchase a particular EVOO product

c) the integration of the two previous objectives to formulate a framework with the main characteristics of the ideal extra virgin olive oil and the consumer to whom it appeals.

1.3. Structure of the research

Specifically, the study in the literature review analyzes all intrinsic attributes (sensory characteristics of the product that cannot be changed like flavor, aroma, color etc.) and extrinsic attributes (traits of human intervention like package, price and origin) of extra virgin olive oil as they were identified by previous researches.

Moreover, the methodology chapter includes the procedure of how these elements are evaluated both qualitatively and quantitatively by a sample of American consumers through an electronic questionnaire sent and responded via email. The questionnaire included demographic information that assisted the formulation of the US consumer profile.

The results are analyzed in the fourth chapter with a descriptive statistical method to give a first notion of the average American consumer of EVOO as there is no previous background with a numerical description of the US profile.Additionally, discussion about the results follows in comparison with the theory background.

Finally, the last chapter includes theoretical and managerial recommendations towards interested parts with regard to the key elements of an EVOO and the limitations of this research as indicated by the nature and timeline of a master thesis.

Literature Review

2.1. Extra virgin olive oil attributes

As mentioned above olive oil is a vital part of the Mediterranean diet and very common in countries like Spain, Italy, Greece, and Tunisia etc. However, the USA is a growing market for olive oil. Over the last 20 years imports of olive oil have risen from 90.000 tons in 1990 to 300.000 tons in 2012 (International Olive Oil Council, 2013), namely 230% increase. Imports are the main resource for the market and cover total demand (IOOC, 2013). Health benefits also are related to olive oil and have given it wider exposure to the public. In particular the Food and Drug Administration has announced the availability of a qualified health claim for monounsaturated fat from olive oil and reduced risk of coronary heart disease (CHD) (FDA, 2004).

Specifically, the reduction of LDL cholesterol helps the prevention and treatment of cardiovascular diseases such as coronary heart disease, the main individual cause of death and morbidity in industrialized countries, lower insulin

requirements which assist diabetes sufferers and even cancer growth prevention (Covas, 2007).
Despite the fact that there is tendency from California growers towards creating new olive groves, the increasing demand still requires imported products to be satisfied. Under these circumstances there have been conducted various researches not only about production but consumer behavior and final consumption too.

Food choice is shaped through two major branches of a product; intrinsic and extrinsic attributes or properties or cues. Intrinsic cues are part of the physical product and cannot be changed without also changing the physical product itself. Extrinsic cues are related to the product, but are physically not part of it. Examples of intrinsic cues are, for meat: color and amount of visible fat; for detergents: color, suds, and smell; and for refrigerators: kind of lining and door hinges. Well-known extrinsic cues are price, brand name, country of origin, and store name (Steenkamp, 1990).

2.1.1. Intrinsic dimensions

2.1.1.1. Flavor

A lot of studies have shown that flavor is a very important factor of olive oil evaluation.
Flavor is mostly affected by the chemical components (phenolic compounds) of the olive oil which are responsible for bitterness and pungency but odor can play a significant role in consumer perception. Recchia et al., 2012 mention that “green” aroma is positively related to product acceptability though this “cut grass” odor may enhance the bitterness perception, thus leading to consumer rejection.
Kalua et al., 2013 state that a premium EVOO has a fruity aroma and a peppery finish generating higher prices for the product. On the contrary, a less quality oil has a “flat” flavor which translates into lower price indices.

Santosa et al., 2010 suggest that strong flavor is an attribute of premium quality and that the particular EVOOs are used for special occasions, as a gift or splurge.

Olive oils with "*milder flavor*" (basic EVOOs) were associated more with "*cooking*" whereas olive oils with "*stronger flavor*" were associated more with "*non-cooking*" purpose. Basic EVOOs were associated with standard, regular, economy, functional, etc. products that could be found in supermarket or grocery store. Not all olive oils in the grocery store were considered basic or regular products; some could be considered as possessing high quality. Fancier oils with beautiful design, elegant bottle, etc. seemed to associated more its utility as a gift or souvenir as opposed to everyday use or basic stock.

Furthermore, many agree (Recchia et al.2012, Predieri et al.,2013, Caporale et al.,2006 and Guerrero et al., 2001) that bitterness and pungency are the two key sensory descriptors for evaluating extra virgin olive oil flavor.

However inexperienced users, such as consumers, were identified to underestimate these traits and prefer fruity olive oils over bitter and pungent as someone would expect.

That is the case for California consumers who are low involved to the subject and can be considered amateurs. Even highly involved users like Spaniards or Italians had ambiguous perceptions. Some considered bitterness and pungency negative characteristics and preferred fruity, nutty and tea-like flavors (Delgado and Guinard, 2011) while heavy users from Lucania, Italy kept a high esteem for these descriptors (Caporale et al., 2006). The wavering between sweetness and bitterness for EVOO flavor is also highlighted by Delgado and Guinard, 2011. Consumers that were considered experts

acknowledged bitterness and pungency as desirable flavor attributes while amateur consumers inclined more to sweeter and smoother characteristics. In any case, flavor was a leading motivator to use olive oil with an average of forty four percent of the consumers quoting it as trait of preference.

2.1.2. Extrinsic dimensions

Consumers' perception in terms of quality relies more on intrinsic (taste, color, smell etc.) rather than extrinsic factors (price, origin, package etc.). Nevertheless, many times (Bredahl, 2004) the external factors oversubscribe the internal ones as consumers lack in time, knowledge and actual expertise over the products. This lack leads consumers to value extrinsic factors more as they identify them as credible and easy to understand.

Mueller & Szolnoki, 2010 mentioned that packaging and brand evaluation were the strongest drivers for informed liking of wine. Consumers' purchase intent was mainly influenced directly by informed liking and price evaluation. Extrinsic attributes were found to impact purchase intent in a mediated process through informed liking, but had no strong direct effect. Consequently, the study indicated that the purchase intent construct captures both perceived product quality and taste preferences on one side and economic constraints on the other side.

2.1.2.1. Origin

A very important key factor of consumer preference is the country of origin (COO). Various researches assert this statement (Dekhili et al., 2011, Caporale et al., 2006 and Siskos et al., 2001, Profeta et al., 2012) as a major non-sensory characteristic that affects consumer purchase intention. Particularly, the indication of origin on an EVOO product creates a pleasant, familiar feeling to consumers and also creates high hedonic expectations about its sensory

attributes whether or not the consumers themselves are highly engaged with the product (Caporale et al., 2006).

Moreover, Profeta et al., 2012 detected the importance of origin for food products at about twenty percent of the sample studied and consider it more effective for specialty products like wine and cheese as they are given credit by the European Union through PDO (Protected Designation of Origin) or PGI (Protected Geographical Indication).

Although intrinsic cues are of most importance when selecting an EVOO, sometimes it is not possible for consumers to obtain a clear view of the product prior to purchase. In such case, extrinsic cues like origin or price are the major factors that affect consumer decisions and final purchase (Dekhili et al., 2011). Especially for “novices”, like French consumers (Siskos et al.,2001), extrinsic attributes and in this case origin is more important than the effect of intrinsic cues like flavor (Maheswaran, 1994 cited by Dekhili et al., 2011) in order to purchase an EVOO. This is denoted by the great impact of official accreditation on French consumers’ preferences (AOC:*Appellation d’Origine Contrôlée,* initially used for wine) which is similar to USA consumer behavior who consider COOC (California Olive Oil Council) approval a positive attribute for an EVOO package (Delgado et al., 2013).

In addition, the region of origin has a bigger effect on expected prices globally rather than on hedonic characteristics like flavor and odor. Dekhili and Hauteville, 2009 empirical findings assert this statement and claim that origin can be considered as a quality cue on certain food markets, such as the olive oil sector, even when there is no official certification.
It is obvious that origin or region of origin plays a significant role in consumers perception of EVOO and can increase not only sensory but also price expectations, hence deliver a better result for all interested parts.

2.1.2.2. Package

Since it is well documented that extrinsic product attributes are of crucial significance, package could not be exempted from this study. Santosa and Guinard, 2011 mention the importance of packaging in EVOO evaluation by consumers. More specifically, the size of the package design had a major impact on price and was classified the second most important factor in consumers' purchase intention. Size varied from 375ml to 1L depending on the purpose of use of EVOO and was related to price range proportionally. The 500ml was found to deliver the highest price and consumers considered it the most attractive for premium brand products. Additionally, apart from size, the esthetics and the color of the package affect consumer perception positively with dark or green being the most preferable colors, glass being the major packaging material and screw top, metal twist cap and cork closure the most preferable tapping objects(Santosa et al., 2013).

Mueller Loose & Szolnoki, 2012 mention the effect of packaging on the price of imported wine in Illinois and Florida (Central and East USA). As consumers had less information about the intrinsic attributes of the product, they relied more on extrinsic cues, particularly package. Similar to this, imported olive oil is a product hard to identify and evaluate based on sensory characteristics only. The extention of wine marketing to olive oil has been notified in France were consumers are similarly "novices" in EVOO consumption and purchase (Dekhili et al., 2011). The aforementioned is enhanced by Delgado et al., 2013 as they identify similar consumer behavior specifically for California residents.

Particularly the overall liking of the package (bottle, label, color, cap, volume, origin) provides high expectations for the product and increases purchase intention of the consumers. Origin was the variable that showed the biggest impact on the overall liking of the bottles and labels with domestic (Californian) dominate over imported. However this cannot be generalized to the Eastern

coast which is more cosmopolitan and inhabited by Mediterranean origin consumers (Greece, Italy and Spain). In addition, packaging was positively correlated with price (up to $30) which fell to $10 for a 375-mL bottle of EVOO when consumers tasted the product. It is evident that flavor is proportionally correlated with price and an attractive package can enhance hedonic expectations of the consumer thus prompt him or her to purchase the product.

To that end, packaging affects expectations regarding flavor which as stated before is a key factor to purchase intention. Velasco et al., 2014 identified the correlation of “sweet” tastes with rounded shapes, typefaces, and names (soft, rounded), while “sour tastes” are better conveyed by means of more angular shapes, typefaces, and names (sharp, angular).

Furthermore, sounds having a low-pitch enhance the perception of sweetness whereas high-pitched sounds enhance the perception of sourness. The aforementioned effectiveness of packaging on flavor perception is enhanced by Becker et al., 2011 where they identified that angular product shapes may inspire intense taste sensations.

Over and above the low-saturated color (light) variant triggered higher price expectations as consumers associate it as classy compared to the high-saturated (bright) package variant that is considered as a cheap, low-quality product that tries to grab attention.

Consequently attractive packaging created high expectations for the consumers; nevertheless they repeated purchase only when they were satisfied by the flavor of the products.

2.1.2.3. Price

Price integrates all extrinsic cues and is the ultimate buying decision factor (Erickson & Johansson, 1985; Monroe, 1982 cited by Veale and Quester, 2009). Consumers have been found to believe that there is a 'natural' ordering of products according to a price scale, where the higher quality products are more expensive and products of lesser quality are cheaper. This price-quality relationship, described in the literature as the 'price-reliance schema', reflects consumers' strongly held view that "you get what you pay for" (Lee & Lou, 1996 cited by Veale and Quester, 2009).

Santosa and Guinard, 2011 identified the importance of price as the ultimate non-sensory factor which affected mostly imported rather than local (California, USA) EVOOs. This was also detected in the United Kingdom where price delivered the highest relative importance as key factor for purchase (Martinez et al., 2002 cited by Santosa and Guinard, 2011).

Another study acknowledged price as the number one factor for purchase intention of consumers in Northern California (Santosa et al., 2013).Specifically, the study revealed an interaction between price range and perceived value and quality of the EVOO product, namely consumers were willing to pay premium prices if the felt they were getting a top quality product. Furthermore, more expensive olive oils were used unprocessed so that the consumers could experience the flavor. On the other hand, cheaper olive oils were used for cooking purposes and were bought in bulk sizes instead of the more elegant, more expensive brands.

To that end, Santosa and Guinard, 2011, mentioned that *cheaper* extra virgin olive oil was perceived as something that is more appropriate for *cooking purpose*. On the contrary, consumers were willing to pay more for a higher quality olive oil if it were to be used for a more special purpose as in salad dressing or as dipping oil. However, forty percent of all consumers could not

estimate a price range regardless of the purpose of use of the EVOO (cooking or specialty).Of those who could recall $12–15.99 was the highest price range cited, by 41% of the consumers,$10–11.99 was the second highest cited price range by about 35% of the participants and $16–20.99 was the third highest cited by about 27% of them. The most cited expensive price range consumers spent for an extra virgin olive oil was $16–20.99 with the second price range cited as being most expensive ever bought being $26–30.99 and the third most commonly cited was off $21–25.99.

2.2. Market profile

2.2.1. Segmentation, Targeting, Positioning

The US market of EVOO can be considered as heterogeneous. There are different uses of EVOO as identified above, namely cooking, salad dressings, exclusive occasions and gifts. Extra virgin olive oil is a premium product right now which adheres to a specific market segmentation through differentiated approaches (IOOC, 2010).

2.2.1.1. Segmentation

The Eastern and Western coast are the top consuming geographical regions in the USA for EVOO. This is justified by the fact that it appeals mostly to sophisticated people who reside in these areas, coasts are the most densely inhabited regions in the US and that previous researches were conducted there due to plenitude of consumers. Additionally, the demographic characteristics of the market could be very interesting. The premium notion for EVOO, particularly for everyday use, premises a rather high income, women as the most popular consuming gender, usually over 30 years old when people earn an adequate living to support the use of EVOO.

2.2.1.2. Targeting

It is evident that the limited resonance of EVOO all over the US fat oil market requires the adaptation of niche tactics and strategy. Focused marketing seems to be the most appropriate targeting approach currently although trends show an upcoming shift to differentiated strategies as EVOO becomes more popular.

2.2.1.3. Positioning

Taking into account the aforementioned market characteristics, a Greek EVOO product could be positioned in the US as a refined, lavish, rare and healthy food product that addresses only to sophisticated, high status consumers that seek quality.

2.2.2. The Marketing Mix

2.2.2.1. Product

The research conducted reveals only a general aspect of the Greek EVOO and not a particular product. Nevertheless, quality of the product is self-established according to the literature review as being an extra virgin olive oil. Packaging ranges from angular to round and from dark to light colored glass bottles. To that end labels of paler color are considered more luxurious as mentioned above, while brand remains undefined as the research studies the purchase perception of consumers for EVOO and their preferences based on existent brands in the US market.

2.2.2.2. Price

As mentioned before price is one of the most important cues for EVOO. Many prices were identified depending on the use of the olive oil and the income of

the consumers. Most suitable prices in this study seem to range from $10-$20 for a 500ml bottle.

2.2.2.3. Promotion

Personal relations and free specimens, especially to celebrities, businessmen and high status consumers in general are a good start to enter this differentiated and demanding segment of the market. Social media advertisements could be used to deliver a sense of word of mouth with low cost.

2.2.2.4. Place

For the product addresses to high end consumers, exclusive delivery through Internet should be the primary channel of a potential producer. In addition, distribution could be accomplished through high end grocery stores like “Wholefoods Market” in order to gain exposure to the desired segment.

Research Methodology

Methodological research is a key tool to obtain accurate data through established and proven scientific methods that provide reliability and validity to our results. The various steps in the formulation of this methodology are anlyzed below. Initially, research philosophy is adopted to guide the whole procedure that includes research approach, design, the selection of the sample to be study and finally the collection of the data.

3.1. Research philosophy

The development of knowledge and the nature of it in a particular field is well-known as research philosophy .The three major ways of developing knowledge are epistemology, ontology and axiology which influence the research process. Epistemology concerns what constitutes acceptable knowledge in a field of study. It is based on the collection and analysis of facts that can be considered as “real”, measureable and more objective data presented in a statistical form thus providing a scientific support as adapted by natural sciences (Saunders et al., 2007).

On the other hand, ontology is a branch of philosophy which is concerned with the nature of social phenomena as entities. It is concerned with the nature of reality and generates in-depth data that reveal the inner cause of it.

To summarize the two terms can be described as (Raddon, 2010):
Epistemology: What Constitutes Valid Knowledge and How Can We Obtain It?
Ontology: What Constitutes Reality and How Can We Understand Existence? (Saunders et al., 2007).

The literature review has given so far an in-depth understanding of the consumer perceptions regarding EVOO. However the inquiry for numerical evidence is necessary to the scope of this study. To that end, epistemology will be the driving philosophy to approach the research objective and formulate the appropriate process, design and analysis of the survey.

Epistemology includes two major research philosophies known as positivism and interpretivism. Positivism relies on information derived from logical and mathematical treatments which constitute the only substantial and valid knowledge. As a consequence it is based on phenomena that can be observed and measured to provide credible data.

On the contrary interpretivism represents another scope, where the research focuses on the “human factor” and separates it from a simple observation as it would have done with objects. A simple example of Interpretivism comes from focus groups where people influence each other to form an outcome, while positivism is present in structured questionnaires (Saunders et al., 2007).

Due to the fact that literature has adopted an intrepretivistic philosophy so far (focus groups, open end questionnaires were most used tools) the adaption of a positivistic philosophy to obtain a statistical view of the subject is suggested. However, a combination of the two could not be rejected.

3.2. Research approach

Scientific investigation comprises of two main research approaches, deduction and induction. Deduction is a process by which we arrive at a reasoned conclusion by logical generalization of a known fact. Contrary to this, Induction is a process where we observe certain phenomena and arrive to conclusions afterwards (Sekaran, 2003).

Vast information about food preference suggested that deduction should be the research approach in order to formulate the appropriate process. Deduction would help to generate conclusions based on an existent theory that could be numerically measured and meet the research goals.

3.2.1. Deduction: Testing theory

Deduction entails seven steps known as the Hypothetico-Deductive Method (Sekaran, 2003):Observation,Preliminary information gathering (Literature Review),Theory formulation,Hypothesizing,Further scientific data collection,Data analysis,Deduction

3.2.1.1. Observation

It is the first stage of the method in which one senses certain changes that occur and cause certain phenomena. This research observed the difficulty of Greek extra virgin olive oil marketing in USA and the need to obtain information about this market's preferences.

3.2.1.2. Preliminary information gathering (Literature Review)

Previous experience and gathered information about similar phenomena to the occurring one are a good insight to possible factors that cause the phenomenon.

The review identified factors like flavor, origin, price, package to influence the preference for an EVOO product in the USA along with demographic criteria.

3.2.1.3. Theory formulation

Theory can be formulated through the integration of all information in a logical manner, so that the factors responsible for the problem (this case the aforementioned four attributes) can be conceptualized and tested.

So far the four key attributes for EVOO along with demographic criteria are considered to play a significant role in consumer preference, namely all characteristics have a positive impact on consumer's purchase intention in a larger or a smaller scale.

3.2.1.4. Hypothesizing

The development of a hypothesis and the test of it is the core of the deductive method of research.

Previous researches suggested that flavor, origin and price will be key factors for consumers along with consumption frequency and their income and have a positive effect on consumers' purchase intention.

3.2.1.5. Further scientific data collection

Since hypothesis is developed, data with respect to each variable in the hypothesis need to be obtained.

A survey with a structured questionnaire was considered as the most proficient tool to gather such information as it delivers accurate and objective data that can be conceptualized and measured as the research objectives required.

3.2.1.6. Data analysis

As soon as data are obtained, statistical analysis follows to see if the hypothesis generated is supported by the facts. The proposed conjectures are tested either through qualitative or quantitative data or a combination of the two.

Quantitative data were collected through the survey's questionnaire and descriptive statistics answered the research hypothesis with the help of mean, median, modal values and standard deviation.

3.2.1.7. Deduction

Finally, the interpretation of the results obtained from data analysis to achieve conclusions is called deduction. The integration of the theoretical background and the data obtain by the survey provided the final outcome of the research.

3.3. Research design

The purpose of the study indicated the appropriate strategy to be followed and the main representatives were exploratory and explanatory studies.

Exploratory studies are used to generate insights that are not identified yet. On the other hand, explanatory studies establish a causal relationship between variables and give an emphasis on the explanation of this relationship. Lastly,

descriptive studies offer a profile of the objectives under investigation (Saunders et al., 2007).

The theory so far has identified and studied each variable of this research separately. The purpose of this study was to deliver a measurable profile of EVOO consumers in the USA regarding their preferences for different EVOO attributes. To that end, descriptive statistics tools were used to answer the research question such as mean, modal and median values and standard deviation.

3.3.1. Research strategy

Experiments and surveys are iconic examples of positivistic approach and deduction method. Surveys are very popular in social sciences as they allow the collection of a large amount of data of sizeable population in a rather economical way. The use of a questionnaire administered to a sample enables the standardization and comparison of the generated data (Saunders et al.,2007).

The survey strategy allowed the collection of quantitative data which were analyzed through descriptive statistics. Consequently, these data measured the effect of each variable and provide a framework for EVOO consumers in the USA. Moreover, it was easier to obtain information about a sizeable population, through valid samples, that would be time consuming and costly otherwise.

3.3.2. Data nature and techniques

Data are divided in two big categories: Qualitative and quantitative. Qualitative data are defined as non-numerical data (words, pictures, sounds etc.) while quantitative are defined as numerical.

The research objective was to measure and find relations among variables in a tangible way, hence suggested the adoption of a quantitative collection technique and analysis procedure. However, the use of a single method of data collection and analysis procedure (monomethod) was not the only alternative.

The combination of quantitative and qualitative techniques and procedures can generate a broader view of the research question. A mixed-model research combines quantitative and qualitative data collection techniques and analysis procedures as well as combining quantitative and qualitative approaches at other phases of the research such as research question generation.

Therefore, the adoption of a quantitative collection method through the structured questionnaire interviews and the qualitative analysis of the data fulfilled the so called triangulation to corroborate research findings within the study (Saunders et al., 2009).

3.3.3. Time horizons

The duration of the data collection process plays a significant role for the generation of credible data. The main categories are cross-sectional and longitudinal studies. According to Saunders et al., 2009, cross-sectional studies contemplate a phenomenon or phenomena at a particular time, while longitudinal researches are based on the study of a phenomenon over a period of time.

The nature of this study indicated the adoption of a cross-sectional time horizon as a survey of this range could deliver results only for a short period of time. Collection began on 10th of September and ended on 10th of October.

3.3.4. The credibility of the research findings

A significant part of every research relies on the credibility of the study findings. It is essential to gain an objective aspect of the phenomena and interpret them without any bias. Nevertheless, sometimes the relationship between the researcher and the study may deliver unrealistic results that are influenced by one's perspectives and will.
Therefore, research design entailed to useful tools that enabled an unbiased, safe and clear view of the phenomena: reliability and validity.

3.3.4.1. Reliability

Reliability refers to the extent to which your data collection techniques or analysis procedures will yield consistent findings (Saunders et al., 2009).

More specifically, it relies on three main assumptions: The first assumes that same results will be generated in other occasions and circumstances. The second suggests that other observers will reach the same results if the follow the same pattern and thirdly raw data interpretation was transparent (Easterby-Smith et al., 2002 cited by Saunders et al., 2009).

The procedure was transparent and there was no guidance towards specific responses. This was secured by the nature of the structured questionnaire. There might be some alterations though as the sample was small and bigger one would provide a broader, more generalizable view.

3.3.4.1.1. Threats to reliability

Robson, 2002 cited by Saunders et al., 2009 asserts that there may be four threats to reliability.

The first of these was subject or participant error, namely answers may be affected by external factors such as time, temper and perception at a certain moment.

Similarly, there may be subject or participant bias. This usually happens when participants have to answer about other people that are included in the research as it occurs with internal company studies. In any case, anonymity of the participants eliminated both such misleads.

Third, there may have been observer errors. It is more apparent in qualitative, open-end questions where the researcher affects the meaning of the question and extracts biased results that are incorrect or irrelevant with the study.

Lastly, there may has been observer bias. Apart from inconsistent questions, biased interpretation affects the final results. A well-structured questionnaire eliminates such deflections.

3.3.4.2. Validity

Validity is concerned with whether the findings are really about what they appear to be about, namely if the relationship between two variables is a causal relationship.

3.3.4.2.1. Threats to validity

a) History

History or timing of the research is major threat of validity. A negative recent announcement regarding the product, service or people under study may deliver inconsistent and biased results, unless the objective of the research is to investigate or explore this negative effect. In this case, the positive announcement of the FDA (FDA, 2004) about EVOO is too far old to affect the results of the study.

b) Testing

The use of a pilot test and afterwards the use of the actual questionnaire may affect participants' perception and deliver undesirable results. Hence, the delivery of the pilot test to people that did not participate in the sample eliminated this threat.

c) Instrumentation

Similarly to testing, instrumentation entails the change of measuring instruments between the pilot and the actual questionnaire (Sekaran, 2003).

d) Mortality or Selection Bias

This refers to participants dropping out of studies. It is a threat for studies that include a specific number of participants or an exclusive sample such as experts (Sekaran, 2003). The sample of this research does not restrict the range of participants.

e) Maturation

Cause-and-effect inferences can be contaminated due to passage of time.This is mostly observed in long-term researches (Sekaran, 2003).

f) Ambiguity about causal direction

Once the causal relationship is identified, the research cannot define the direction of the cause, namely if variable A causes a phenomenon represented by variable B or the opposite. None of the results obtain was unclear about its influence.

3.3.4.3. Generalizability

Generalizability also known as external validity raises issues towards the extent to which the results of a study can be applicable (Sekaran, 2003). This may be a particular worry if somebody is conducting case study research in

one organization, or a small number of organizations or to test the robustness of the study conclusions by exposing them to other research settings in a follow-up study. In short, as long as there is not claim that the results, conclusions or theory can be generalized, there is no problem (Saunders et al., 2009).

3.3.5. The ethics of research design

The topic of the research may be subject to ethical issues which should be avoided in order to gain scientific approval and acknowledgement. The main issues to be considered are cited by Sekaran, 2003:

1.The use of coercion or social pressure on individuals to participate on experiments
2.Any sort of diminishing questions or tasks that lower self-respect
3.Deceiving participants over the real purpose of the study
4.Exposing participants to physical or mental stress
5.Not allowing participants withdraw from the research whenever they want to
6.Use of the results against participants or for illegitimate purposes
7.Exposure of participants to hazardous environment
8.Not debriefing participants fully and accurately after an experiment is over
9.Privacy and confidentiality break ups

3.4. Selection of sample

The entire group of people that we are interested in investigating is called the population of the study. A subset of the population consists the research sample while each single member of the sample is called the subject and each single member of the population is the element (Gujarati, 2011). Sampling is the process of selecting a sufficient number of elements of a population, so that the study of the sample characteristics can be generalized and give us the

characteristics of the population (Sekaran, 2003). Due to huge population sizes the need for a representative sample is evident. The sample statistics (sample mean, variance etc.) are estimated as closely to the population parameters (population mean, variance etc.) with the help of scientific approach. The selection of a representative sample (Gujarati, 2011) relies on two key elements. The first is the size of the sample *n* and the second is the sampling design.

3.4.1. Sample design

Sampling techniques are divided into two big branches: probabilistic and non-probabilistic. Probabilistic entails the assumption that each element of the population has equal chances of selection for the sample. As a result, statistical inference can be achieved and the answers to the research question and objectives can be generalizable. Therefore, surveys and experiments usually adopt this sampling technique. On the other hand, non-probabilistic models the probability of an element of the population to be selected is unknown thus restricting the researcher from statistical ground that can offer generalizability (Saunders et al., 2009). Often it is used for in-depth approaches as it occurs with exploratory research. The nature and objective of this study suggest the probabilistic sampling technique as the most appropriate to deliver statistically valid results.

3.4.1.1. Simple random sampling

According to Sekaran, 2003 in the unrestricted probability sampling design or simple random sampling, every element in the population has a known and equal chance of being selected as a subject. Saunders et al., 2009 state that It is an accurate and easy way to conduct a large scale survey and cost depends on the size of the sample and computerization of the process. The use of electronic questionnaires eliminates cost at minimum as emails are free,

provides quick results and analysis is completed through Computer Aided Design software (CAD).

As for this study, the population is all USA adults and the sample will be selected among them. However, the real population of the research is not identified as there is no information about the size of EVOO consumers in the USA but only EVOO consumption data. Hence, the use of a validity question about consumption will assist the researcher to obtain reliable results relative to the research question and objectives.

3.4.2. Sample size

The fact that the size of the population is not identified, but only assumed, hampers the accuracy over the number of participants in the research. It is widely accepted (Sekaran, 2003, Saunders et al., 2009 and Gujarati, 2011) that for a confidence level of 95% with a confidence interval of 5 requires a sample size of 384 for 10.000.000 population elements and above. As result the study will try to obtain 384 responses to satisfy the aforementioned statistical theory. However, fewer responses may be accepted as the population of EVOO consumers is not accurately identified yet.

3.5. Data collection

There are various methods to collect primary data such as observation, interviews and questionnaires. The nature of this study indicates the use of a questionnaire as tool to collect the desired information.

Questionnaires are separated according to the way they are administered. Self-administered ones are completed by the respondents themselves, while interview-administered are recorded by the interviewer on the basis of each respondent's answers (Saunders et al., 2009).

As thoroughly described before the research obtained data through Internet mediated questionnaires that were completed by the respondents themselves. This provided a quick and easy way to collect data that could instantly be processed with the help of appropriate software.

3.5.1. Questionnaire design

The design of the questionnaire required specific types that provided valid and reliable data according to the research question and objective. In this study, the use of category and ranking questions is promoted as the most suitable to fulfill the aforementioned requirements. As Saunders et al., 2009 state, category type refers to a question with a given set of categories that allow only one response and are appropriate to collect data relative to attributes. The ranking type offers the possibility to collect opinion information and a 1-10 rating scale was used. It is possible that the use of questions such as demographics will require coding if they are to be processed by computer.

As mentioned before the lack of data regarding the size of the population of EVOO consumers requires a filter question that will exclude non-consumers at the beginning of the survey. The first chapter of the questionnaire will include demographic information such as gender, age, income, region of residence in the USA and educational and marital status. These data are vital to the survey as they will identify a demographic sample of the EVOO consumers in USA as stated in Section 2.2. (Market profile-STP).

The second stage of the questionnaire entails attribute queries both in a numerical rating scale leg and a category type leg. For instance, flavor, origin, package and price were identified by the literature survey as the key factors of consumer preference for EVOO. To that end numerical rating scale questions ranging from 1 to 10 with a meaning of Little to A lot preference will be included. The same pattern will be followed for the other three attributes.

Additionally, in each query there will be another leg of category type question. For example, for the flavor attribute there will be five preference choices: sweet, fruity, nutty, pungent and bitter. Similarly for the rest of the attributes there will be such choices. This extra feature is added to identify not only the extent to which every characteristic affects consumer preference but also which particular element delivers such results.

3.5.2. Pilot test

No matter how good a questionnaire may seem there is a possibility that it has some deficiencies that do not meet research expectations, therefore needs some modifications. A preliminary distribution of the questionnaire to experts like the supervising professor will assist to the identification of misleads and be a good test of validity or reliability of the data.

3.5.3. Consent letter

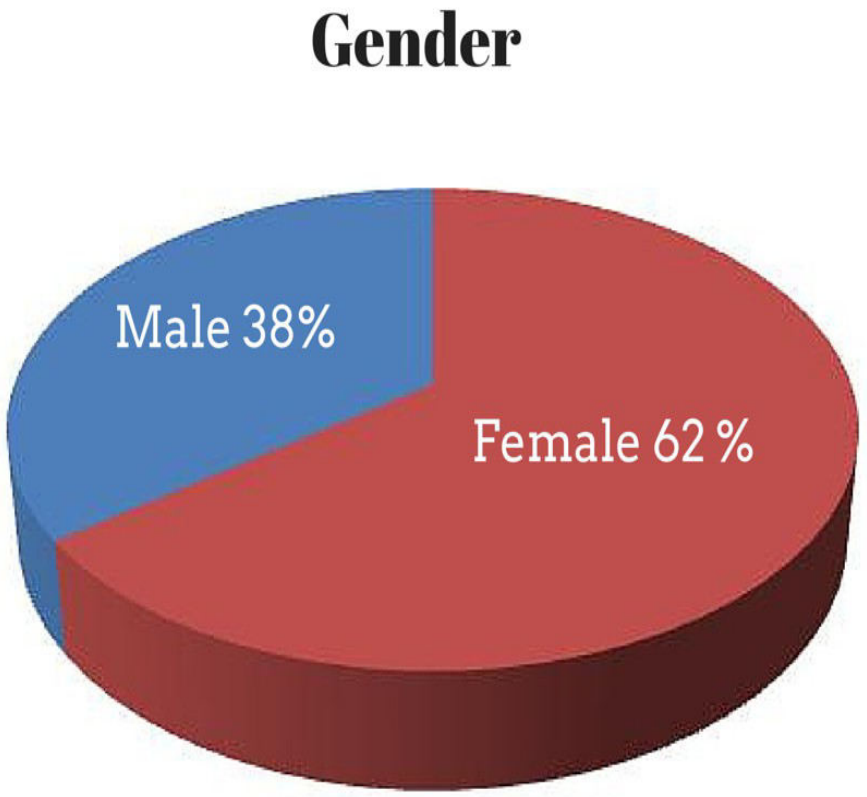
The use of a covering letter is to explain the purpose of the survey to the participants and is place on the front page of it. This might be helpful for respondents as they decide whether to answer the questionnaire or not (Saunders et al., 2009). In order to save time and money the use of a header explaining the survey purpose could prove adequate.

Data analysis and results

In this chapter we analyze the responses obtained by the distributed questionnaires both statistically and qualitatively in three different parts: demographics, qualitative attributes and attribute evaluation.

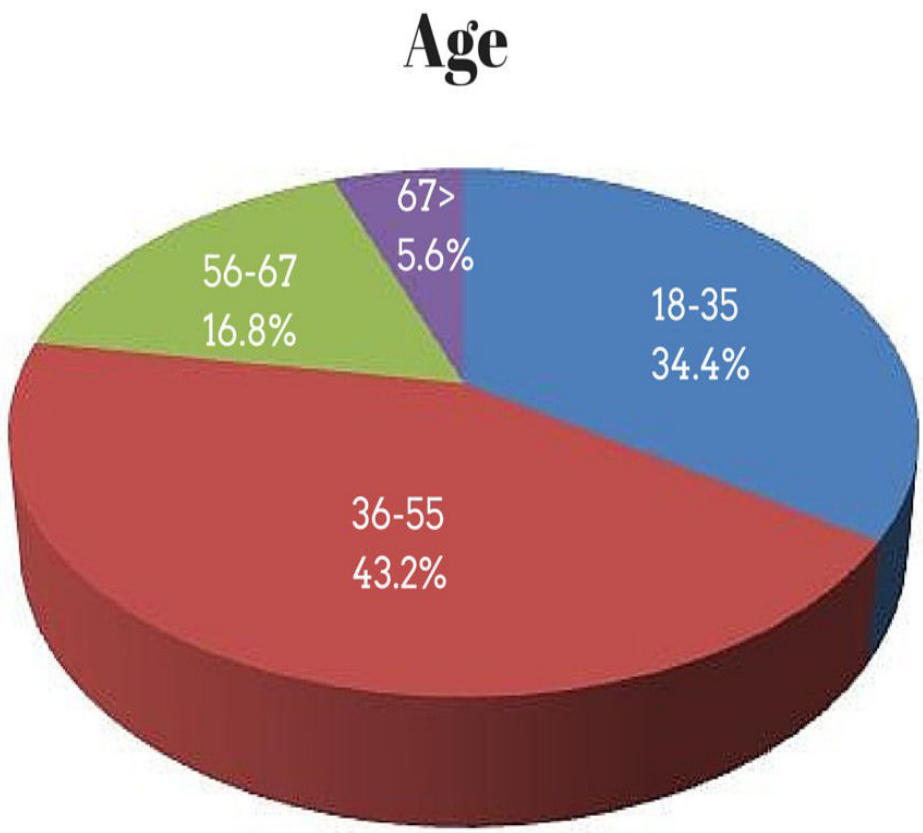
4.1. Demographics analysis

The data collection revealed some aspects of the demographic profile of the US consumer of extra virgin olive oil.



Graph 4.1.1.: *Gender estimation*

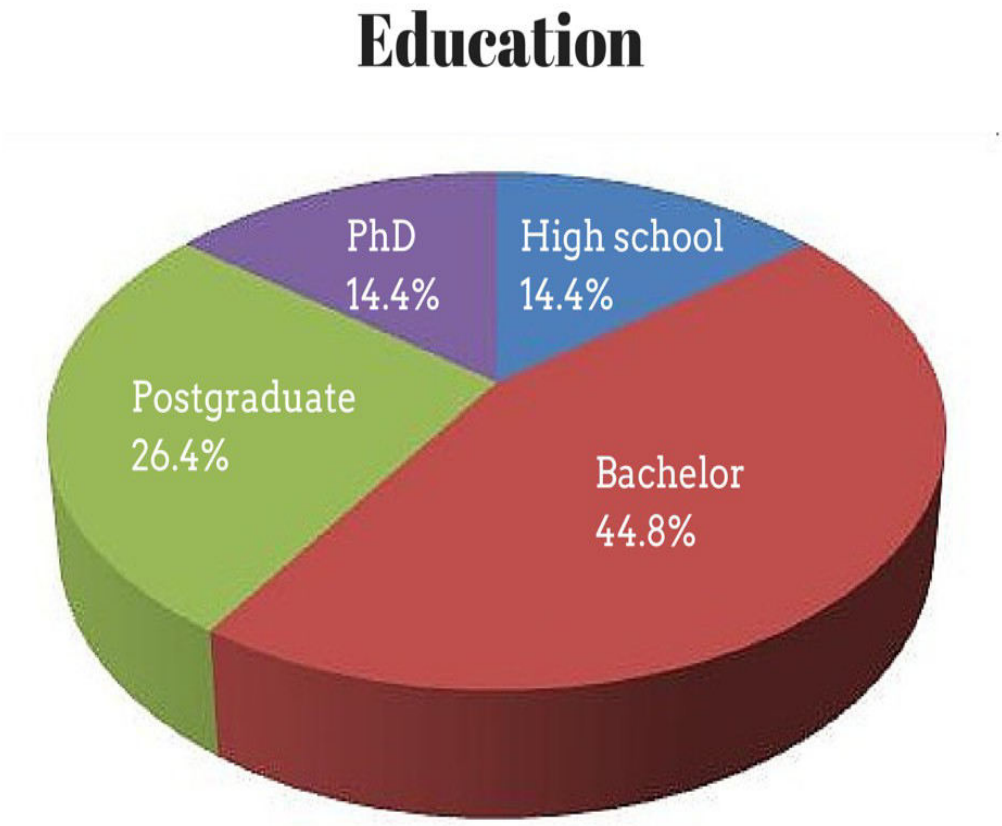
The sample consisted of 78 women and 47 men which gave a significant lead ratio of 2/3 to 1/3 for women. This resulted in 62% of the sample to be females while 38% were males. Women were the most identified EVOO consumers and this is based on two major factors; they tend to cook more than men, hence they are receptive to new ingredients or cuisines like the Mediterranean and they are more health conscious than men.



Graph 4.1.2: *Age range of the average US EVOO consumer*

The majority of EVOO consumers (77, 6%) belong to the dynamic group of age between 18 and 55 years old, while only about 23% of them are middle-aged or entering retirements. Specifically, 43 participants, namely 34.4% were 18-35 years old, 54 consumers between 36-55 years old were the majority of the sample (43.2%), 21 participants were 56-67 years old and consisted 16.8% of the survey and only a mere 5.6% was over 67 years with only 7 representatives. Modal and median value were estimated at “2” value, namely the 36-55 age group. Mean value and standard deviation were calculated at 1.93 and 0.86 respectively. The adoption of a relatively new oil fat , as EVOO,

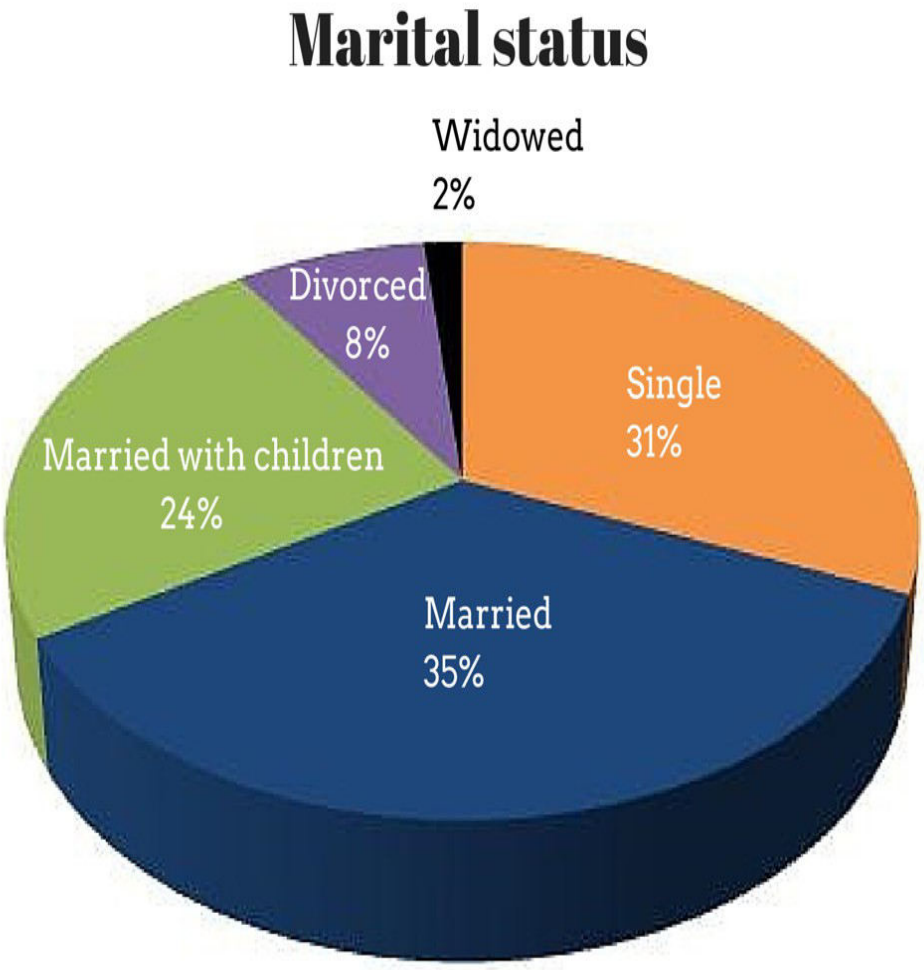
is substantiated by young ages that are willing to purchase, experiment and consume new ingredients, contrary to older ones.



Graph 4.1.3: *Education index of EVOO consumers*

More than 85% of the participants reported that they received higher education with 44.8% having a Bachelor, 26.4% postgraduate participants and 14.4% PhD consumers. Analytically, 18 participants came from High School, 56 consumers had a Bachelor degree, 33 consumers had a postgraduate title and 18 participants were Doctors in their field. Modal, median and value were estimated at “2” value, namely the Bachelor group. Mean value and standard

deviation were calculated at 2.41 and 0.90 respectively. The sophisticated, exquisite and health friendly olive oil requires a higher level of education, so that consumers can perceive and appreciate its value.



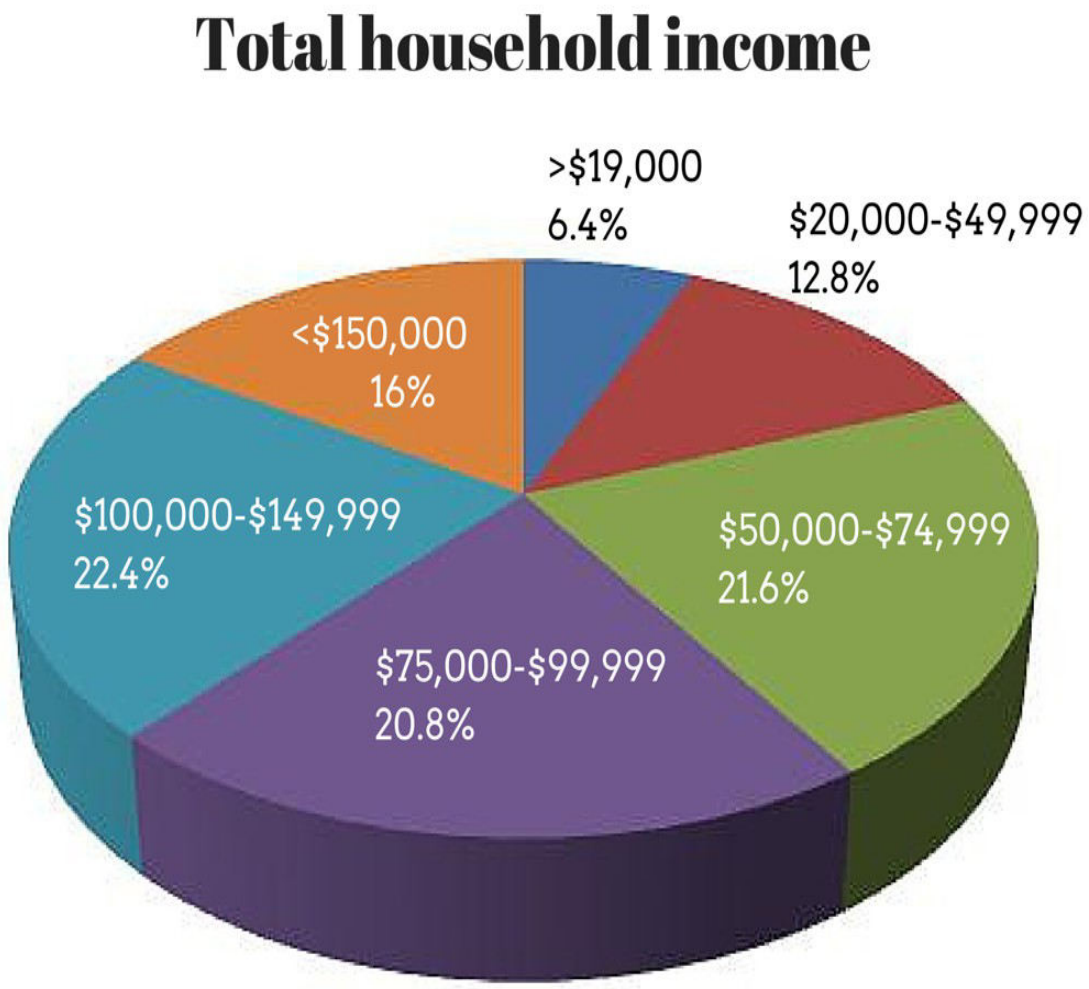
Graph 4.1.4: *Marital status*

More than 50% of the sample was married, while on the contrary 41% percent was single for various reasons. More specifically, 31% or 39 of the participants were single while 8% or 10 of them were divorced and 2% of the sample were widowed. Married people that had no children had the largest stake of the

sample with 44 participants and 31% followed by married people with children who counted for 24% of the sample or 30 consumers.

Modal and median value were estimated at “2” value, namely the Married group. Mean value and standard deviation were calculated at 2.14 and 0.99 respectively.

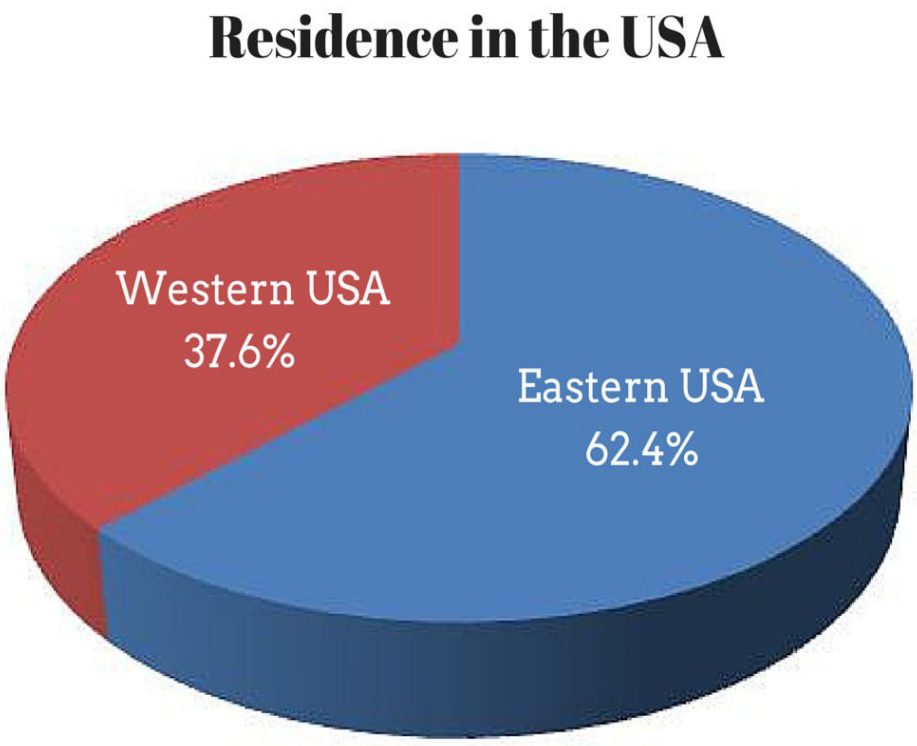
Moreover, marital status had ambiguous results as it varied from single to married and married with children. The mean, modal and median values however suggest the notion that EVOO consumers are primarily married with no children.



Graph 4.1.5: *Total household income*

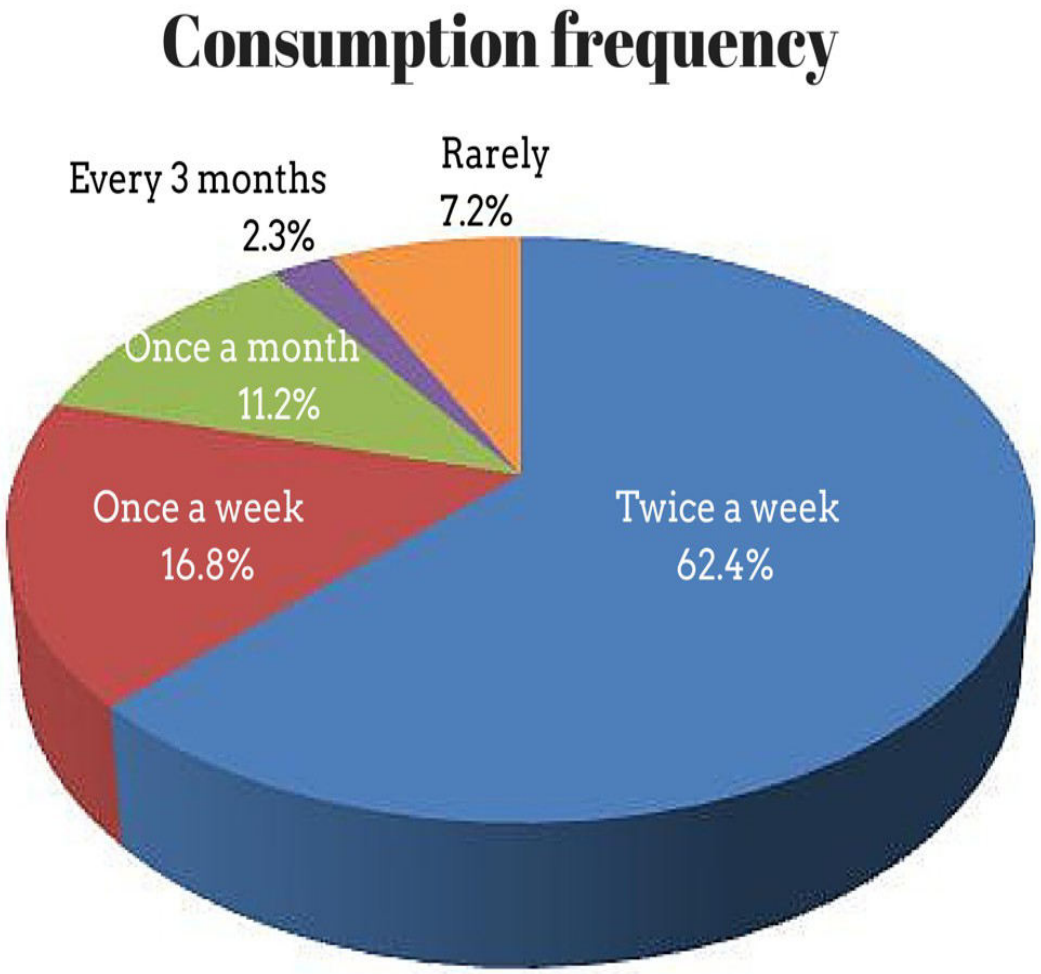
An astonishing number of 80% of the sample had a middle upper or upper household income ranging from $50,000 to more than $150,000. Twenty seven consumers, namely 21.6% of the sample had an average income of $62,500, twenty six participants (20.8%) earned $87,500 on average per year and were surpassed by 28 consumers (22.4%) of the upper level earners who reported an average of $125,000. The richest segment that accounted for 20 participants (16%) earned more than $150,000 annually. The lower income segment was just 6.4% and the middle class had 12.8% share of the sample. Modal value was estimated at “5” value, namely the group of $100,000-$149,999 and median at “4” value, namely the group of $75,000-$99,999.

Mean value was calculated at 3.88 and standard deviation at 1.47. Income was supposed to be of high value as EVOO is an expensive fat oil compared to other traditional substitutes, therefore would require a higher income to support regular use. Results have shown that the average consumer had a total household income higher than $75,000 placing him/her among upper-middle and rich US residents.



Graph 4.1.6: *Region of residence in the USA*

The residents of eastern states outnumbered the Westerners by almost 25% as they account for 62.4% of the sample with 78 participants, while the western region was represented with 47 participants and 37.6%.



Graph 4.1.7: *Consumption frequency*

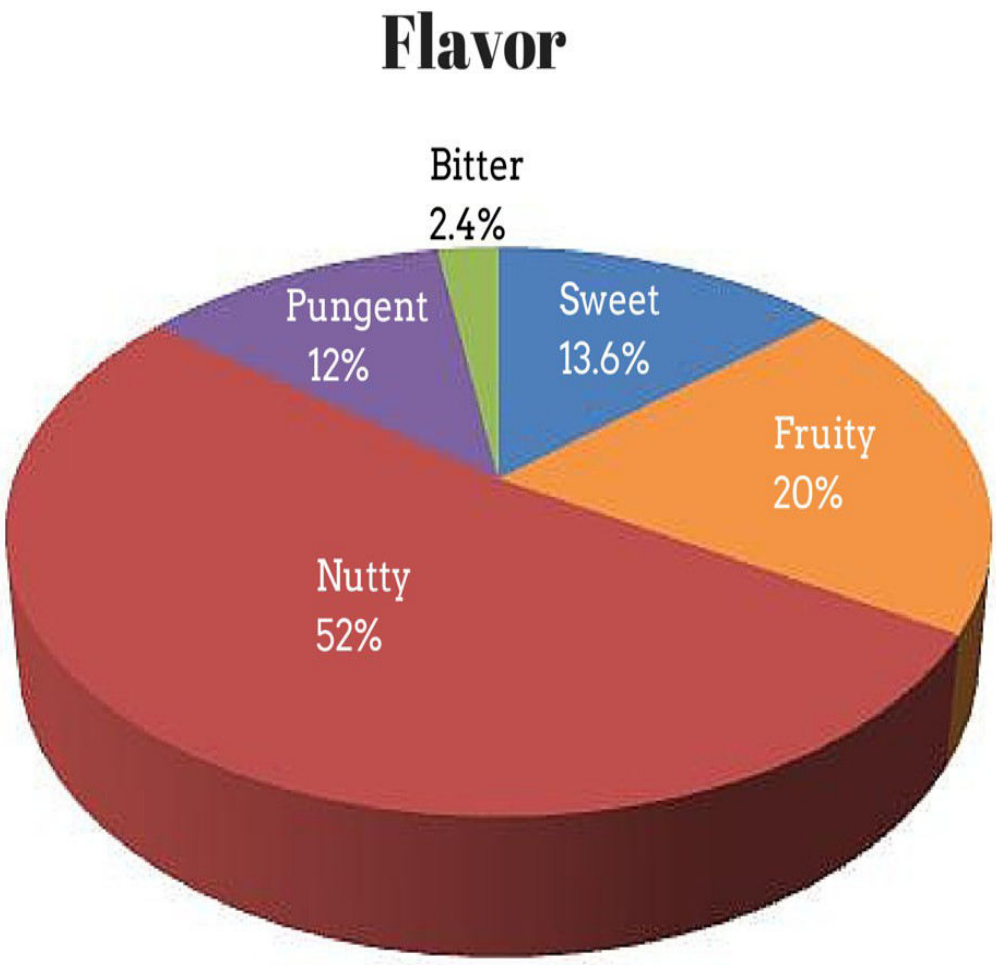
About 63% of the participants, 78 consumers, are heavy users as they consume EVOO twice or more a week. Regular consumption is observed by around 17% of the sample, 21 consumers, while 11.2% consumes EVOO at least once a month and only 2.3% consumes every three months or rarely (7.2%).

Modal and median value were estimated at “1” value, namely the “Twice a week or more” group. Mean value and standard deviation were calculated at 2.41 and 0.90 respectively. Eventually, frequency measurements showed a huge percentage of regular consumption, sometimes everyday/heavy use

(modal and median values), but the safest assumption is to adopt the regular consumption result (once a week).

4.2. EVOO attributes analysis

The main goal of this research was to evaluate the effect of EVOO attributes on consumer's purchase intention. These are listed below as seen in the graphs.

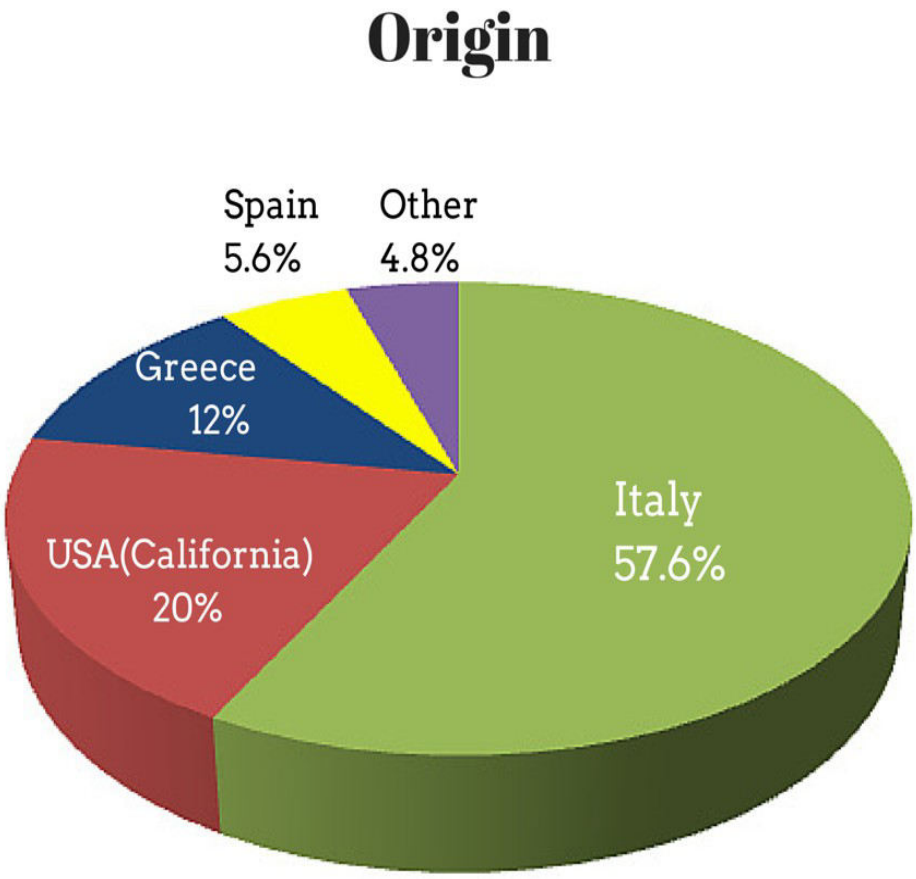


Graph 4.2.1.: *Flavor distinction*

The majority of the sample prefers “nutty” as the best flavor for an EVOO with 52% and 65 participants. Second in preference comes “fruity” with 20% and is followed by “sweet” and 13.6%. The more classic flavors like “pungent” (12%) and “bitter” (24%) are not as highly appreciated as in European, experienced consumers.

Modal and median value were estimated at “3” value, namely the “Nutty” group. Mean value and standard deviation were calculated at 2.70 and 0.93 respectively.

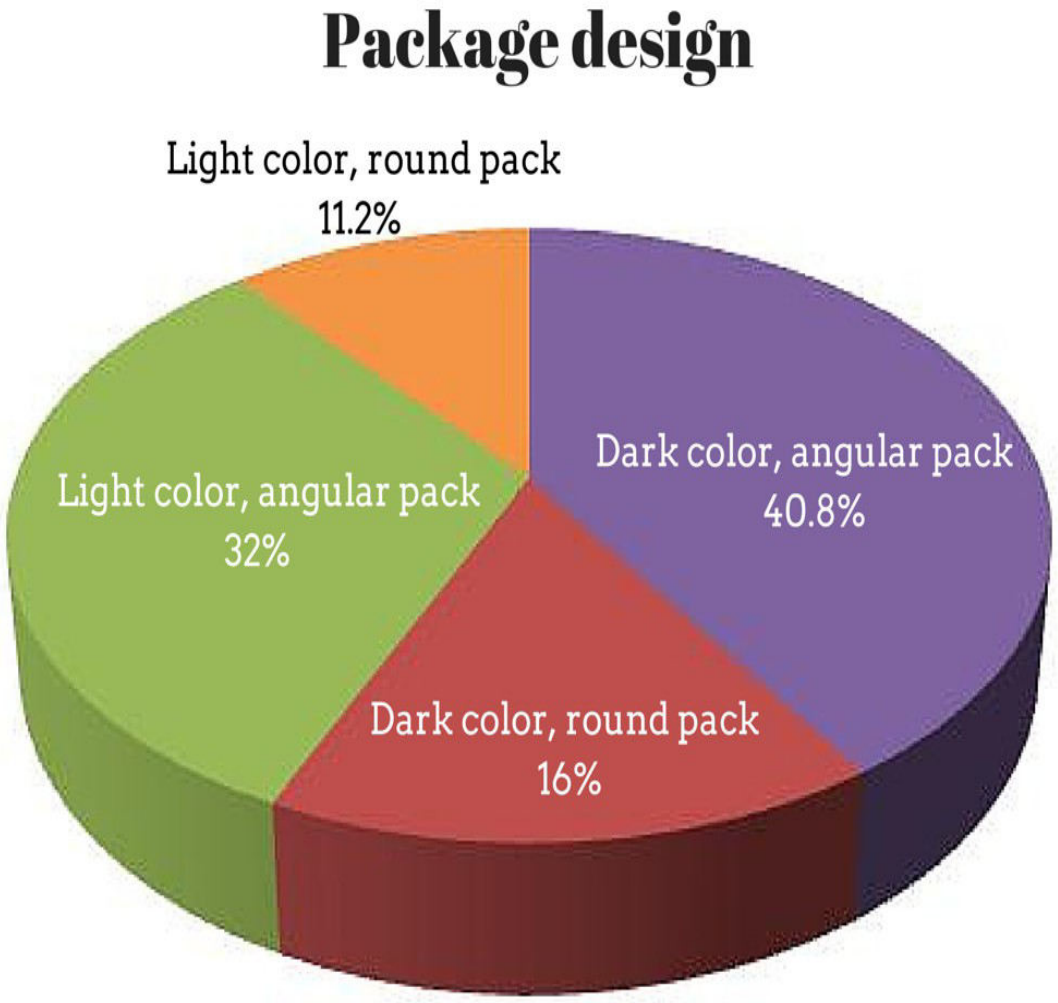
Flavor was identified as an important cue for consumer purchase intention. The most preferred one seems to be nutty instead of bitter or pungent as somebody would suppose. This is probably due to American consumers’ inexperience in this relatively new product. Bitterness and pungency are selected by European consumers that have a long-time engagement with EVOO, while Americans influenced by traditional oil fats are keener to prefer similar flavors like nutty. Fruity came as second option which is usually observed in inexperienced consumers, thus corroborate the aforementioned notion about nutty. Finally, the lack of adequate law coverage allows lower quality products to be sold as pure EVOOS that are at best mixes with virgin olive oil. This could provide different organoleptic characteristics to consumers who perceive nutty as the real taste of EVOO.



Graph 4.2.2: *Country of origin*

As expected Italy is the top country of origin for EVOO with 57.6% and 72 participants followed by USA and California particularly with 20% and 25 consumers while Greece was chosen by 12% and 15 participants. Spain (5.6%) and other countries (4.8%) like Tunisia, Turkey, and Chile etc. do not have significant awareness in the US extra virgin olive oil market. Modal and median value were estimated at “1” value, namely the Italy group. Mean value and standard deviation were calculated at 1.80 and 1.15 respectively.
Origin is discussed in various food sectors as it denotes quality. French wines are a common example and for this case Italy is the most acknowledged producer of EVOO. Since Italy merchandizes most of global production it is logical that consumers adopt its leading presence as the top quality. USA

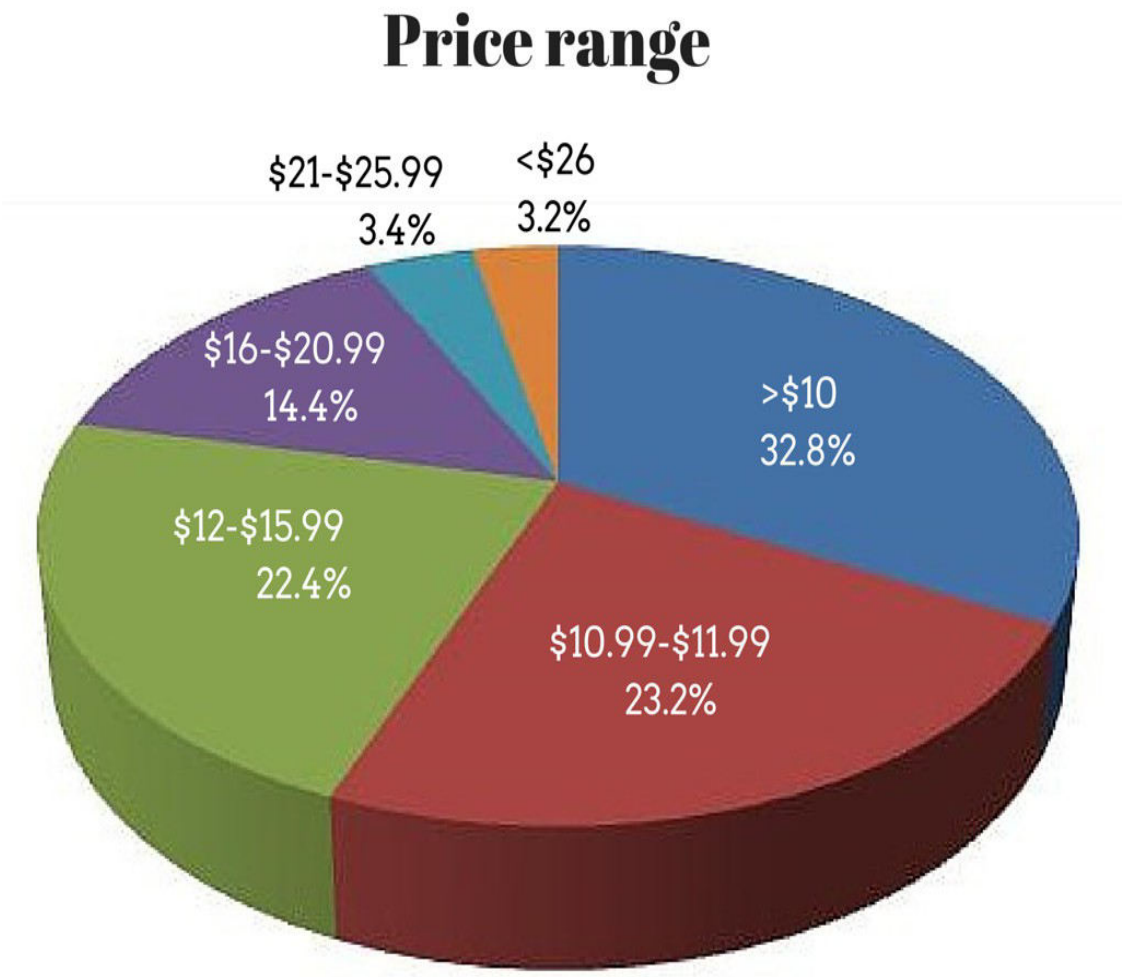
comes second as it enters market lately and could prove a competitor for Italy in the future. Greece is the third option in this research mainly because there are fewer Greek EVOOS merchandized in the USA and have a lower spread in the market. To sum up, Italy is the most appreciated country of origin for EVOO consumers mainly because it has a bigger variety of labels and market share.



Graph 4.2.3.: *Package design*

The four available choices for an EVOO package delivered some interesting and controversial results. Dark color and angular packages account for 40.8% and 51 participants while Light color and angular packages account for 32% with 40 consumers. Round packages either dark colored (16%) or light colored (11.2%) seem to have a lesser effect on the consumers' purchase preference. Modal value was estimated at "1" value, namely the Dark color, angular pack group and median at "2" value, namely the Dark color, round pack group. Mean value was calculated at 2.14 and standard deviation at 1.08.

Package is a very important element of every product nowadays. The Dark colored, angular package was the most popular among participants but the Dark colored, round package is the average one. This can be explained by flavor results with nutty and fruity as the top two preferred options. Velasco et al., 2014 stated that "sweeter" tastes were related to soft, round shapes while "sourer" tastes were better expressed through sharp, angular ones. Therefore, nutty as the presuming taste is related with the angular package as they are sour, while fruity is related with the round alternative. The selection of either package comes up to the particular flavor of the EVOO and the notion it wishes to attach.



Graph 4.2.4: *Price range for a 500ml (17oz) package*

Although 32.8% is willing to pay less than $10 for a 500ml package, a considerable 23.2% would pay $10-$11.99 and 22.4% would pay $12-$15.99.Higher prices of $16-$20.99 range were chosen by 14.4% of the sample and only a slight percentage would pay more than $21 ($21-$25.99 with 3.4% and <$26 with 3.2%).

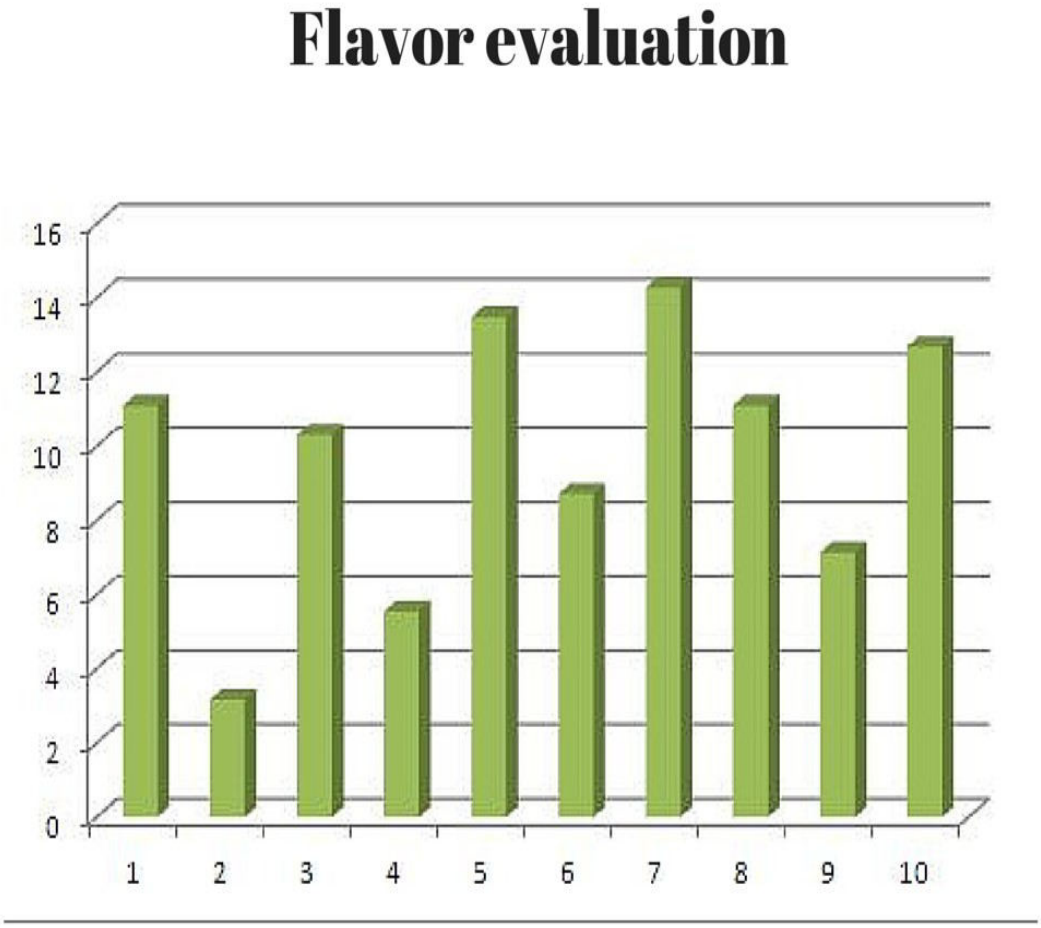
Modal value was estimated at “1” value, namely the group of less than $10 and median at “2” value, namely group of $10.99-11.99. Mean value was calculated at 2.43 and standard deviation at 1.35.

The highest average price that the participants would pay was between $11 and $12 for a 500ml (17oz) EVOO package. Price is formulated depending on

the perceived quality and the use of extra virgin olive oil. As stated previously, quality of current products may justify such prices or maybe heavy users demand a value-for-money olive oil. Statistical facts show that price could range from less than $10 to $16 depending on the perceived value.

4.3. Attribute evaluation analysis

Apart from qualitative data there was also a quantitative measurement of each attribute that affects EVOO purchase preferences.

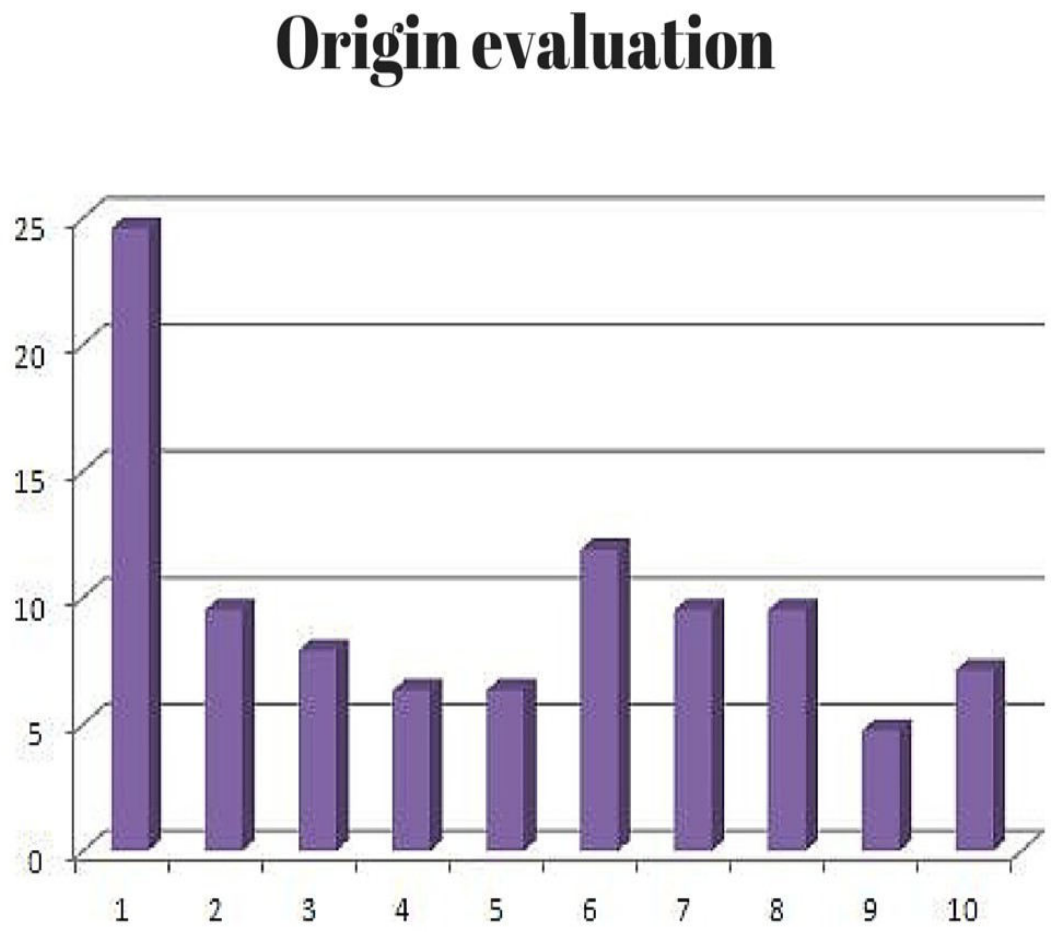


Graph 4.3.1.: *Flavor evaluation*

Flavor was considered a key factor for EVOO consumers and was proportionate with consumption frequency. Analytically, 54% of participants were positively affected by flavor with 14.6% evaluating flavor with “7”, “8” with 11.4%, “9” with 7.3% and “10” was selected by 13% of the sample. On the other hand, 31% was little influenced or not at all with “Not at all”,”1” accounting for 11.4% of the participants, “2” approved by 3.3%, “3” selected by 10.6% and “4” picked by 5.7% of the participants. Lastly, a significant 13.8% of the sample chose “5” was neutral towards flavor as a factor to purchase EVOO.

Modal value was estimated at “10” value and median at “6” value. Mean value was calculated at 5.91 and standard deviation at 2.85.

Flavor evaluation determined a high impact of this attribute on consumer purchase intention. Specifically, the majority of the participants graded flavor with the biggest value (modal value=10) and even the mean value “6” reveals a positive causal relationship between desired flavor and purchase intention.

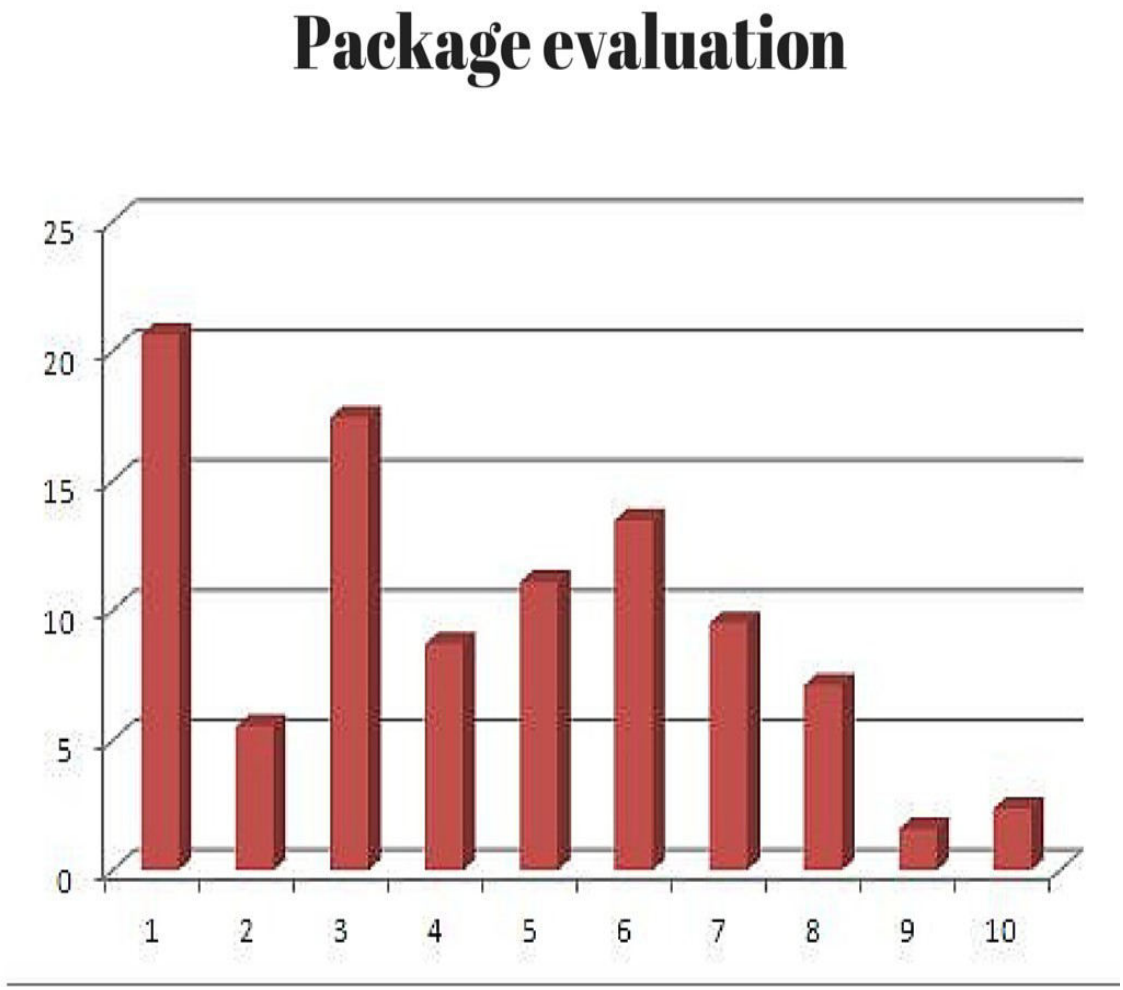


Graph 4.3.2.: *Country of origin evaluation*

Origin seems to play a minor role in consumers' purchase decision for EVOO. As seen in the graph above about 25% of the participants (25.2%) selected "1", namely "Little", as a factor that influences them to purchase an EVOO. In the same pattern, "2" was picked by 9.8%, "3" by 8.1% and "4" by 6.5% accumulating to a closely 50% of negative approach (49.6%) for origin as an EVOO attribute. However, positive evaluation accounts for 44% of the sample with "6" gaining 12.2%, "7" and "8" with 9.8% each, "9" with 4.9% and "10" with 7.3%. A few participants were neutral towards origin as 6.5% of the sample selected "5" in the numeric rating scale.

Modal value was estimated at “1” value and median at “5” value. Mean value was calculated at 4.73 and standard deviation at 3.08.

Origin had opposite effects as the majority did not consider it at all (modal value=1) as a key factor to purchase a particular EVOO product. Though the average participant was neutral towards origin, standard deviation and mode reflect a negative causal relationship between origin and purchase intention, namely origin has little effect on consumers.



Graph 4.3.3.: *Package evaluation*

Package has been little appreciated by the participants as 53.6% of the sample chose a negative value. Specifically, “1”, namely “Little” accounts for 21.1% of the answers, “2” chosen by 5.7%, “3” holding a considerable 17.9% and “4” adding 8.9% to the negative scale. Positive answers were around 35% of the respondents (34.9%) with “6” being first with 13.8%, “7” following with 9.8% and “8” reporting 7.3%. The most positive answers were little appreciated as “9” remarked 1.6% and “10” 2.4%. A considerable 11.4% was neutral towards package and selected “5”. Modal value was estimated at “1” value and median at “4” value. Mean value was calculated at 4.37 and standard deviation at 2.58. Package evaluation had similar results with origin as consumers did not appreciate this attribute as much as expected. Particularly, the majority had no interest at all at the package of the product (mode=1) and the mean value=4 was negative. Standard deviation suggests a negative causal relationship between package and purchase intention similar to origin. Consequently, package can be considered as a neutral factor for EVOO consumers preferences.

Graph 4.3.4.: *Price evaluation*

Price evaluation delivered highly appreciated answers as an outstanding 74.2% consider price the main factor for EVOO purchase. More analytically, “6” collected 8.9% of the respondents, “7” amassed 16.1%, “8” came first with 23.4%, “9” accumulated 7.3% and “10” collected 18.5% of the participants’ responses. On the contrary, the lowest percentage so far responded (11.3% cumulative) evaluated price as the least factor to purchase an EVOO. Indicative is only “4” scale with 6.5% of the respondents and “2” with 2.4%; values “1” and “3” were chosen by 1.6% and 0.8% respectively.
Eighteen participants were neutral over price and selected “5” accounting for 14.5% of the sample. Modal value was estimated at “8” value and median at “7” value. Mean value was calculated at 7.14 and standard deviation at 2.18.

In conclusion, price is the most important attribute for consumers to purchase an EVOO product. All statistical values (mode=8,median=7,mean=7,14) suggest that consumers take price into consideration a lot when it is about purchasing extra virgin olive oil. Even the lowest statistical reference (neutral=5) reveals a positive causal relationship between price and consumer preferences.

Conclusion and recommendations

The last chapter of this research includes a conclusion about the results analyzed before, some recommendations about Greek extra virgin olive oil marketing in the USA and the limitations of the study.

5.1.Theoretical comparison and outcomes

The analysis of the results has delivered some interesting data. Theory and previous studies indicated that the four pylons of EVOO perception and purchase are Flavor, Origin, Package and Price with regard to demographic characteristics as age, income, education and marital status.

Despite the fact that origin was considered to be a major attribute for EVOO quality, thus purchase intention, based on various researches and the notion that people perceive its characteristics as they do with wine; it appears that origin has little effect on their decision (see Graph 4.13).

This is the case also for package which has a neutral impact on consumers' intention (see Graph 4.14).Theory suggested that packaging can be a quality attribute and attract consumers to purchase a particular product. However, this effect is only for a first-time option when people cannot evaluate an EVOO other than its extrinsic cues. Once they taste the product, packaging has no effect on their evaluation.

On the contrary, flavor and price are the two most important attributes as they were identified both by theory background and the survey results. Flavor was highly evaluated (see Graph 4.12) as expected by theory and qualitative data (nutty and fruity) were also compatible to previous studies (see Graph 4.8.). Finally, price was the most important factor for consumers to purchase an EVOO as expected (see Graph 4.15). Both theory and results agree that a product price ranging between $10 and $16 for a 500ml (17oz) is acceptable by consumers and is positively correlated with quality.

5.2. Recommendations for interested parts

This study formulated a profile about the average US EVOO consumer as shown in the figure below:

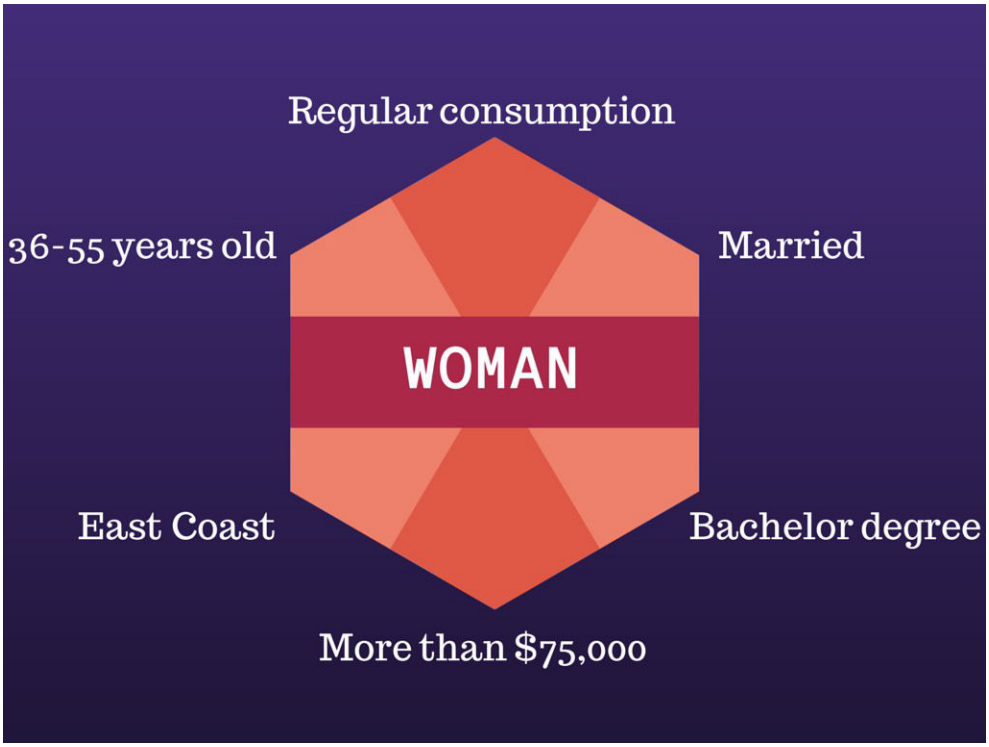


Figure 5.1.: *EVOO consumer profile*

The market profile (see Section 2.2) has suggested a consumer profile that comes in agreement with the one formulated after the survey. A woman around

35 years old with an upper level of education (Bachelor degree) living with her husband in the East Coast and earning cumulatively more than $75,000 annually.

This kind of consumer is willing to purchase an EVOO product either through high-end markets like Wholefoods Market and Red Apple Markets or through the Internet with exclusive and customized delivery services. This particular distribution would add value to a premium food product as the objective of the study examined.

The ideal EVOO product would entail the four characteristics pylons as these are demonstrated in the figure below:

Figure 5.2.: *EVOO product attributes*

A dark colored, angular bottle with a pale colored label is suggested as the optimum solution both by theory and actual results. Apart from esthetic reasons it also enables better storage and transportation instead of the rounded alternatives.
Flavor as described before should be nutty or fruity at least. Origin does not play a substantial role as it was analyzed oftentimes, so Greek origin would be a neutral if not a positive attribute for the product.

Finally, price should be around $12 or even higher depending on the exclusivity of the product. Specifically, as discussed in the literature review, an everyday EVOO would claim a value-for-money price at $12 for a 500ml (17 oz) package, nevertheless a higher price at $15 could signify a product of higher quality positioning it in the premium food sector.

Figure 5.3.: *The ideal EVOO product*

5.3. Limitations

Due to lack of time and expenditure, the sample size was not as large as it should be with 125 respondents versus 384 required. Unfortunately the results of this study cannot be generalized but they can be a guide for further investigation.

References

Journals

Becker et al., 2011: Liza Becker, Thomas J.L. Van Rompay,Hendrik N.J. Schiffersteinb, Mirjam Galetzkaa, Tough package, strong taste:The influence of packaging design on taste impressions and product evaluations, Food Quality and Preference, 22(1)(2001),pp.17-23

Bredahl, 2004: Lone Bredahl, Cue utilisation and quality perception with regard to branded beef, Food Quality and Preference, 15(1) (2004),pp.65-75

Covas, 2007: Maria-Isabel Covas, Olive oil and the cardiovascular system, Pharmacological research,55(2007), pp.175-186

Caporale et al.,2006: Gabriella Caporale, Sonia Policastrob, Angela Carluccia, Erminio Monteleone,Consumer expectations for sensory properties in virgin olive oils,Food Quality and Preference,17 (1-2) (2006), PP.116-125

Dekhili et al., 2011: S.Dekhili, L.Sirieix, E.Cohen, How consumers choose olive oil: The importance of origin cues, Food Quality and Preference,22 (8) (2011), pp.757-762

Delgado and Guinard, 2011: Claudia Delgado,Jean-Xavier Guinard ,How do consumer hedonic ratings for extra virgin olive oil relate to quality ratings by experts and descriptive analysis ratings?,Food Quality and Preference, 22 (2) (2011),pp.213-225

Delgado et al.,2013: Claudia Delgado, Aurora Gomez-Rico, Jean-Xavier Guinard,Evaluating bottles and labels versus tasting the oils blind: Effects of packaging and labeling on consumer preferences, purchase intentions and expectations for extra virgin olive oil, Food Research International, 54 (20 (2013), pp.2112-2121

Erickson and Johansson, 1985: G.M. Erickson, J.K. Johansson, The role of price in multi-attribute product evaluations, Journal of Consumer Research, 12 (1985), pp.195-199

Guerrero et al., 2001: L.Guerreo, A. Romero, J. Tous,Importance of Generalised Procrustes Analysis in sensory characterisation of virgin olive oil, Food Quality and Preference, 12 (8) (2001), pp.515-520

Kalua et al., 2013: Curtis M. Kalua, Danny R. Bedgood Jr., Andrea G. Bishop, Paul D. Prenzler, Flavour quality critical production steps from fruit to extra-virgin olive oil at consumption, Food Researxh International,54 (2) (2013),pp.2095-2013

Lee & Lou, 1996: M. Lee, C.-C. Lou,Consumer reliance on intrinsic and extrinsic cues in product evaluations: A conjoint approach,Journal of Applied Business Research, 12 (1) (1996), pp. 21–30

Martinez et al., 2002: M.G. Martinez, Z. Aragonés, N. Poole,A repositioning strategy for olive oil in the UK market,Agribusiness, 18 (2) (2002), pp. 163–180

Monroe, 1982: K.B. Monroe,The influence of price on product perceptions and product choice, Advances in Consumer Research, 9 (1) (1982), pp. 206–209

Mueller Loose & Szolnoki, 2012: Simone Mueller Loose, Gergely Szolnoki Market price differentials for food packaging characteristics, Food Quality and Preference,25 (2) (2012), pp.171-182

Mueller & Szolnoki, 2010: Simone Mueller, Gergely Szolnoki, The relative influence of packaging, labelling, branding and sensory attributes on liking and purchase intent: Consumers differ in their responsiveness, Food Quality and Preference, 21 (7) (2010), pp.774-783

Predieri et al.,2013: Stefano Predieri, Chiara Medoro, Massimiliano Magli, Edoardo Gatti, Annalisa Rotondi, Virgin olive oil sensory properties: Comparing trained panel evaluation and consumer preferences,Food Researxh International, 54 (2) (2013), pp.2091-2094

Profeta et al., 2012: Adriano Profeta, Richard Balling, Jutta Roosen,The relevance of origin information at the point of sale, Food Quality and Preference, 26 (1) (2012), pp.1-11

Recchia et al.2012: Annamaria Recchia, Erminio Monteleone, Hely Tuorila, Responses to extra virgin olive oils in consumers with varying commitment to oils,Food Quality and Preference, 24 (1) (2012), pp.153-161

Santosa and Guinard, 2011: Metta Santosa, Jean-Xavier Guinard,Means-end chains analysis of extra virgin olive oil purchase and consumption behavior, Food Quality and Preference, 22(3)(2011), pp.304-316

Santosa et al., 2010: Metta Santosa, Herve Abdib, Jean-Xavier Guinard,A modified sorting task to investigate consumer perceptions of extra virgin olive oils, Food Quality and Preference, 21 (7) (2010), pp.881-892

Santosa et al., 2013: Metta Santosa, Elizabeth J. Clow, Nicole D. Sturtzenberger, Jean-Xavier Guinard, Knowledge, beliefs, habits and attitudes of California consumers regarding extra virgin olive oil, Food Research International, 54 (2) (2013), pp.2104-2111

Siskos et al., 2001: Y.Siskos, N.F. Matsatsinis, G.Baourakis, Multicriteria analysis in agricultural marketing: The case of French olive oil market, European Journal of Operational Research, 130 (2) (2001), pp.315-331

Steenkamp, 1990: Jean-Benedict E.M. Steenkamp, Conceptual model of the quality perception process, Journal of Business Research, 21 (4) (1990), pp.309-333

Veale and Quester, 2009: Roberta Veale, Pascale Quester, Do consumer expectations match experience? Predicting the influence of price and country of origin on perceptions of product quality, International Business Review, 18 (2) (2009), pp.134-144

Velasco et al., 2014: Carlos Velasco, Alejandro Salgado-Montejoa, Fernando Marmolejo-Ramos, Charles Spence,Predictive packaging design: Tasting shapes, typefaces, names, and sounds, Food Quality and Preference, 34 (2014), pp.88-95

Books

Gujarati, 2009: Damodar N. Gujarati, Essentials of Econometrics, McGraw-Hill Higher Education, 4th edition,2009

Saunders et al., 2007: Mark Saunders, Philip Lewis, Adrian Thornhill, Pearson Eduacation Ltd,4th edition, 20075th edition

Saunders et al., 2009: Mark Saunders, Philip Lewis, Adrian Thornhill, Pearson Education Ltd,5th edition, 2009

Sekaran, 2003: Uma Sekaran, Research Methods for Business: A skill building approach, 4th edition, 2003

Internet links

Raddon,2010: https://www2.le.ac.uk/colleges/socsci/documents/research-training-presentations/EpistFeb10.pdf

IOOC, 2013:http://www.internationaloliveoil.org/estaticos/view/131-world-olive-oil-figures

FDA, 2004: http://www.fda.gov/newsevents/newsroom/pressannouncements/2004/ucm108368.htm

Appendices

Appendix 1: Survey Questionnaire (see page below)

Extra virgin olive oil (EVOO) consumers in USA questionnaire

This is a questionnaire for a Master's dissertation in International Hellenic University, Thessaloniki,Greece. All responses are anonymous and will be used for academic purpose. You are kindly requested to answer all questions.

* Απαιτείται

Demographics

Gender *

- Male
- Female

Age *

- 18-25
- 26-30
- 31-40
- 41-50
- 51-60
- 60+

Education level *

- High school
- Bachelor
- Postgraduate
- PhD

Marital status *

- Single
- Married with children
- Married with no children
- Divorced
- Widowed

Total household income *

- $19,999 and below
- $20,000-49,999
- $50,000-74,999
- $75,000-99,999
- $100,000-149,999
- $150,000 and above

Region of residence in the USA *

- East
- West

How often do you consume EVOO? *

- Twice a week or more
- Once a week
- Once a month
- Every three months
- Rarely

Συνέχεια »

Ολοκληρώθηκε το 50%

« Πίσω Υποβολή

100%: Τα καταφέρατε.

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